



September 6, 2012

REVISED COPY

TOTAL WATER TREATMENT SYSTEMS
DOUG MIKELSON
5002 WORLD DIARY DR
MADISON WI 53718-3084

Re: Description: WATER TREATMENT DEVICE - SITE SPECIFIC/COMMERCIAL
Manufacturer: TOTAL WATER TREATMENT SYSTEMS
Product Name: PINNACLE FOODS PROCESSING (BIRD'S EYE) DARIEN WI
Model Number(s): ARSENIC (TRANS. I.D. 2135629)
Product File No: 20120331

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of September 2017.

This approval is contingent upon compliance with the following stipulation(s):

- No conventional bypass piping shall be installed on these arsenic reduction devices. However, a locking bypass may be installed.
- Any wall hydrant that is not served by these arsenic treatment devices must have one, or more, of the following:
 1. The handles of the hydrant shall be removed;
 2. The hydrant shall be capped and sealed using solder; or
 3. Signage shall be posted immediately above the hydrant indicating the water is unfit for human consumption.
- All water distribution piping shall be marked as required by Table 82.40-1a.
- The finished installation must undergo a final inspection prior to the treated water being used for consumptive purposes. The Plumbing Consultant having jurisdiction in this area is Ryan Boebel. Mr. Boebel can be reached via the following:

Phone: 608-412-3998

E-mail: ryan.boebel@wi.gov

If the treated water is used for consumptive purposes prior to passing the final inspection, then this approval may be rendered null and void and the devices ordered removed. The Plumbing Consultant shall provide a written indication of the results of the final inspection to the system owner.

When the final inspection has been passed, the Plumbing Consultant will notify the Wisconsin Department of Natural Resources (WDNR) Field Staff having authority over the well. The WDNR will then monitor the quality of the treated water to its satisfaction. Monitoring advice, which the WDNR is free to accept or reject, is provided elsewhere in this letter. The WDNR Field Staff having authority over this well is Rick Engelfried. Mr. Engelfried can be contacted via the following:

Phone: 262-884-2361

E-mail: engelw@dnr.state.wi.us

- The suggested monitoring interval for this installation is quarterly. The following tests should be performed:
 1. Total dissolved arsenic;
 2. Free chlorine residual; and
 3. Total iron

The water quality samples should be collected at a time of day when the devices are as near peak demand as possible. Untreated and treated water samples should be collected together in sets, the untreated sample taken upstream of all water treatment devices and the treated sample downstream of all water treatment devices.

It is important to understand that this treatment system is using the free chlorine residual to regenerate on a continuous basis. The free chlorine also assures that all dissolved arsenic present will be in the pentavalent state. In addition, this system is designed to take advantage of the co-precipitation of dissolved iron and dissolved arsenic. The optimal ratio of Fe to As is $\geq 20:1$, and this ratio should also be verified on an ongoing basis.

- Flow controls shall be installed on each unit to preclude each device from exceeding its maximum rated service flow rate (i.e. 400 gpm/unit x 4 units = 1,600 gpm maximum rated service flow rate). This system is designed such that treatment units go online/offline based on the demand for treated water.
- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.
- If this approved device is modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- Any PVC piping installed for water distribution must be approved in advance via a Petition for Variance. This is necessary because PVC pipe is not an approved water distribution material (i.e. it does not appear in Table SPS 384.30-8). This is because PVC pipe loses its structural integrity at elevated water temperatures. This is a separate issue that falls outside the scope of this approval. It is the responsibility of Pinnacle Foods/Bird's Eye, not necessarily Culligan Total Water, to obtain an approved Petition for Variance prior to installation.

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Based on testing data submitted to and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of contaminants as specified on pages 1 through 3 of this letter.

This system was approved based on engineering calculations. The actual performance of this device for a specific end use installation will vary due to local factors such as water pressure, water temperature and water chemistry. The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter
Plumbing Product Reviewer
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Division of Industry Services
Department of Safety and Professional Services
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